THE CORE

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In This Issue

President's Message

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Marcus Stroke & Neuroscience Center

Grady Memorial Hospital

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Dear colleagues,

Our society is approaching a decade of existence and with that comes a time for reflection. What have been our accomplishments? What does the future hold for us? More importantly, what do we hold for the neurointerventional field?

What have been our accomplishments?

Interventional Neurology has matured tremendously as a specialty. Indeed it is fair to say that almost a century later the pioneering spirit of Antonio Egaz Moniz - the first of our kind – finally returns. Interventional Neurologists have been essential in paving the path of clinical evidence in neuroendovascular therapy. Despite a relatively young existence our ***Scientific Contributions*** have been remarkable. Our specialty has had a stunning participation in most and has led many of the randomized clinical trials that have dramatically changed the therapeutic landscape of stroke including the SWIFT, TREVO-2, SWIFT Prime, REVASCAT, ESCAPE, and VISIT trials.

Our ***Annual Meetings*** have traditionally been one of the jewels of our society. The 8th SVIN's Annual Meeting which took place in Bonita Springs, Florida last October was superbly organized by Dr. Alex Abou-Chebl and congregated over 241 participants representing a new record in the meeting's attendance. A total of 91 original abstracts were presented ranging from basic science topics to translational randomized clinical trial data. The meeting counted with an astonishingly diverse geographic representation with members from Canada, China, Egypt, France, India, Iran, Ireland, Japan, Republic of Korea, Pakistan, Peru, Philippines, Qatar, Switzerland, Turkey, and United Kingdom – a testimony to great success of our recently created ***SVIN International Committee***. Equally successful has been our ***Annual Stroke Center Workshops***. Under the leadership of Dr. Vallabh Janardhan, the 3rd Annual Stroke Center Workshop attracted a total of 141 attendees who through the course of 1.5 day had in depth discussions about the current and future stroke systems of care models and challenges.

Our society grows stronger because the dedication of our members and the alliance and contributions of other likeminded individuals. Kudos for the 2015 SVIN awardees: Dr. Tudor Jovin (Neurointerventional Pioneering Award in recognition of his outstanding contributions to training and mentoring of Interventional Neurologists), Dr. Michael R. Frankel (Neurologist Pioneering Award in recognition of his outstanding contributions to the field of Interventional Neurology), Dr. Mayank Goyal (Innovation Award in recognition for his innovation in the field of Interventional Neurology), Andrew Xavier (Award of Excellence in recognition of exceptional accomplishments to the SVIN), Alex Abou-Chebl (Distinguished Service Award in recognition for his substantial service to the SVIN), Dr. Sushrut S. Dharmadhikari (Young Investigator Abstract Award for his work entitled "Prevalence and Healing Rates of Duplex Detected Carotid Plaque Ulcers"), Dr. Fawaz Al-Mufti (Best Abstract Award for his work entitled "Admission Neutrophil–Lymphocyte Ratio Predicts Delayed Cerebral Ischemia Following

President's Message

Aneurysmal Subarachnoid Hemorrhage"), Dr. Alicia Castonguay (SVIN 2015 Pilot Grant Award for her Research Project entitled "Sub-analysis of the TRACK Registry Database"), and Dr. Randall Edgell (SVIN 2015 Pilot Grant Award for his Research Project entitled "Vertebral Origin Treatment via Endovascular Techniques Registry – VOTER").

The SVIN has worked in close ***collaboration with other societies to advocate*** for the interest of our patients, members, and specialty. In collaboration with the interventional neuroradiology and endovascular neurosurgery leaderships, the SVIN has acted both at national (through CAST) and international (through the WFITN) levels to ***standardize the neuroendovascular fellowship training***. Along with other professional societies, we are actively engaged in processes to improve the ***medical reimbursement*** for neuroendovascular procedures and promote patient education and public awareness.

Our ***Interventional Neurology journal*** continues to flourish by receiving growing support from our membership. The number of submissions to our journal has essentially doubled since our last meeting. A robust taskforce has been recently initialized with the goals of decreasing manuscript revision times, restructuring the Editorial Board by incorporating more SVIN members, and establishing a goal of acceptance to "*PubMed ahead of print*" of 3 weeks maximum.

What does the future hold for us? More importantly, what do we hold for the neurointerventional field?

The recent clinical trials represent one of the most significant advances in stroke seen by our generation. Nevertheless the task is far from completed as many questions remain unanswered and patient outcomes although markedly improved are still far from ideal. Even with the modern treatment paradigms as many as 40-70% of the patients suffering a large vessel occlusion stroke still face severe long-term disability or death. Only recently we started to better understand the interactions between the disease and its treatment. We now know that it is not about having "good outcomes" but rather "better outcomes". Discussions about patient selection often focus on what is the perfect technique when perhaps all we need is the "good enough" technique. Much emphasis has been placed on what happens in the hospital when what happens before the patient reaches the hospital may represent a better opportunity to improve outcomes and provide treatment to a larger segment of the population. Given our unique training and skillset we are in a singular position to explore and hopefully solve many of these questions. It is time for us to unite our research efforts in a more formal and organized manner. One of the main objectives of the ***SVIN Research Taskforce*** will be to develop the ***SVIN Endovascular Stroke Treatment Outcome Registry (SESTOR)*** and organize a societal based ***Consortium*** for future studies and clinical trials. Other important initiatives are in place. The ***Vascular Neurology Taskforce*** has been established with the goal to increase participation of non-interventional vascular neurologists in our society and define how we all can better collaborate. The idea about the creation of a multi-societal non-commercial ***Industry Stroke Consortium*** to support greater public stroke awareness and education was presented to our industry partners during the last SVIN Meeting.

Please make plans to join us for the SVIN 2016 Meeting which will be held November 16 - 19, 2016 at the New York Marriott at the Brooklyn Bridge in Brooklyn, New York!

This is without any doubts one of the most exciting times for Vascular and Interventional Neurologists. The SVIN wholeheartedly calls for your support to help us advance stroke care and research. Please volunteer, share your ideas, and let's fight stroke together!

Sincerely yours,

Raul G Nogueira, MD, FSVIN

SVIN 2015 Highlights

SVIN 2015/2016 Executive Committee:

President: Raul Nogueira, MD, FSVIN
President-Elect: Italo Linfante, MD, FAHA, FSVIN
Treasurer: Robin Novakovic, MD

Secretary: David Liebeskind, MD

Immediate Past President: Tudor Jovin, MD, FSVIN

SVIN would like to extend a special thank you to Vallabh Janardhan, MD, FSVIN for his service as Treasurer and Andrew Xavier, MD, FSVIN for his service as Secretary.

Vallabh, MD, FSVIN

Andrew Xavier, MD, FSVIN

Welcome to the following newly appointed At-Large Board Members:

Ameer Hassan, DO, FSVIN

Amer Malik, MD, MBA

Qaisar Shah, MD

2015 Award Recognition – Congratulations to the Following:

Neurointerventional Pioneering Award: Tudor Jovin, MD, FSVIN
In recognition of your outstanding contributions to training and mentoring of Interventional Neurologists.

Neurologist Pioneering Award: Michael R. Frankel, MD
In recognition of your outstanding contributions to the field of Interventional Neurology.

Innovation Award: Mayank Goyal, MD, FRCPC
In recognition for your innovation in the field of Interventional Neurology.

Award of Excellence: Andrew Xavier, MD, FSVIN
In recognition of exceptional accomplishments to the Society of Vascular and Interventional Neurology.

Distinguished Service Award: Alex Abou-Chebl, MD, FSVIN
In recognition for your substantial service to the Society of Vascular and Interventional Neurology.

Young Investigator Abstract Award: Sushrut S. Dharmadhikari, MD
For his presentation, *Prevalence and Healing Rates of Duplex Detected Carotid Plaque Ulcers*

Best Abstract Award: Fawaz Al-Mufti, MD
For his presentation, *Admission Neutrophil–Lymphocyte Ratio Predicts Delayed Cerebral Ischemia Following Aneurysmal Subarachnoid Hemorrhage*

2015 Award Recognition – Congratulations to the Following:

Congratulations to the following Fellow Travel Grant Awardees:

Norman Ajiboye, MD

Alhamza Al-Bayati, MD

Fawaz Al-Mufti, MD

Sushrut Dharmadhikari, MD

Mohamad Ezzeldin, MD

Vinit Gupta, MD

Vishal Jani, MD

Tareq Kass-Hout, MD

Cynthia L. Kenmuir, MD, PhD

Priyank Khandelwal, MD

Andrey Lima, MD

Laura Markham, MD

Suman Nalluri, MD

Thomas James Oxley, MD

Vijay Mahadev Pandav, MD

Mazen Noufal, MD

Gautam Sachdeva, MD

Tehmina Salahuddin, MD

Sameer Sharma, MBBS

Hazem Shoirah, MD

Yamin Shwe, MD

Nikil Swamy, MD

Wled Wazni, MD

Congratulations the following SVIN 2015 Pilot Grant Awardees:

Alicia Castonguay, PhD

Research Project Title: *Sub-analysis of the TRACK Registry Database*

Randall Edgell, MD, FSVIN

Research Project Title: *Vertebral Origin Treatment via Endovascular Techniques Registry (VOTER)*

SVIN Would like to Welcome the Following FSVIN Members:

Johanna T. Fifi, MD, FSVIN Ameer E. Hassan, DO, FSVIN Ramy El Khoury, MD, FSVIN

Apply for FSVIN!

The Society of Vascular and Interventional Neurology offers a program that denotes "letters" to recognize exceptional service, academic excellence, and leadership in the field of vascular and interventional neurology. This program is called Fellow of Society of Vascular and Interventional Neurology. Individuals who meet the requirements of this Fellowship will add the letters, FSVIN, to their respective titles.

Fellows Corner: Proposing a Standardized Neurointerventional Fellowship Curriculum

Finally you've started your long-anticipated Endovascular Surgical Neuroradiology (ESNR) fellowship and there is not enough time for anything besides doing whatever it takes to being a fellow. There has never been a more exciting time to be an ESNR fellow; technology continues to supply us with new tools and now the evidence is on our side as we carry out the standard of care!

In order to master the current practice of ESNR, significant time must be invested in studying and perhaps more importantly, in an apprenticeship in the angiosuite. Although mastering and refining clinical skills is essential, it could potentially overwhelm academic and research activities.

Differences exist in fellowship training depending on the educational background of Neurointerventional faculty, the patient volume of the center and multiple other parameters. Unfortunately there is no official endorsed curriculum required for graduation. In 2002, the ACGME formalized the eligibility of neurologists, neuroradiologists and neurosurgeons to obtain training in "Endovascular Surgical Neuroradiology" along with a proposed curriculum.

The curriculum proposed by the ACGME is rightfully comprehensive and encyclopedic. Thus, some junior fellows may be intimidated on how to approach such a wealth of information. We therefore decided to brainstorm and come up with a potential outline of what topics should be covered depending on one's stage of training. Although different people and training programs may progress at different paces, herein we propose a curriculum that is largely based on the way our fellowship is organized as well as an abstract that was presented at the SNIS 2014 by Dr. Ankur Garg entitled "Organization of a Neurointerventional Fellowship Curriculum."

The model divides the ESNR fellowship into 4 quarters, each 6 months long with gradual progression of the depth and intensity of the theoretical and procedural learning.

Month 1-6	
Didactic	Introduction to embryology of cerebrovascular system and congenital variants Introduction to cerebrovascular anatomy Introduction to external carotid system anatomy
Clinical	Obtaining informed consent Introduction to dictating/preparing angiography reports Monthly Morbidity, mortality, improvement conference Monthly cerebrovascular conference Monthly Decisions Conference / difficult cases review Monthly Neuroradiology conference
Procedural	Moderate Sedation and anesthesia Introduction to vascular access, closure devices, contrast agents Introduction to diagnostic table set up, biplane operations Introduction to neurointerventional equipment and devices Part 1 (Diagnostic materials – introducer sheaths, diagnostic catheters, wires, closure devices) Introduction to radiation safety Simulator training Session I (Flow models, computer models)

Fellows Corner: Proposing a Standardized Neurointerventional Fellowship Curriculum

Months 6-12	
Didactic	Review of stroke intervention trials Evidence based medicine Evidence based medicine : Seminal ESNR articles on: Acute ischemic stroke Cerebral Aneurysms AVMs Basics of acute ischemic stroke Introduction to cerebral venous anatomy Introduction to spinal vascular embryology, anatomy
Clinical	Introduction to Neurocritical Care Introduction to Diagnostic Neuroradiology Research during neurointervention fellowship Monthly Morbidity, mortality, improvement conference Monthly cerebrovascular conference Monthly Decisions Conference / difficult cases review Monthly Neuroradiology conference
Procedural	Introduction to neurointervention equipment and devices Part 2 (Interventional devices; i.e microcatheters, intracranial stents, intracranial balloons, embolization materials, microcoils) Aortic Arch navigation Neurointerventional techniques for stroke intervention Neurointerventional techniques for intracranial aneurysms Endovascular management of vasospasm Endovascular management of intracranial AVMs Embolization for tumors of head and neck Intraoperative neurophysiologic monitoring Introduction to diagnostic spinal angiography
Months 12-18	
Didactic	Intracranial aneurysms Review of aneurysm trials: Evidence based medicine Review of AVM literature Evidence based medicine Dural arteriovenous fistulas and their management Carotid cavernous fistulas and their management
Clinical	Advanced neurocritical care Advanced neuroradiology Senior endovascular conferences Monthly Morbidity, mortality, improvement conference Monthly cerebrovascular conference Monthly Decisions Conference / difficult cases review Monthly Neuroradiology conference

Fellows Corner: Proposing a Standardized Neurointerventional Fellowship Curriculum

Procedural	Introduction to advanced vascular access (i.e Radial, direct carotid access) Introduction to spinal interventions/ Spinal vascular lesions and their management Intracranial stenting and balloon angioplasty Provocative testing: balloon test occlusion and Wada testing Vein of Galen aneurysmal malformation Neurointervention for epistaxis and oropharyngeal bleeding Introduction to pediatric diagnostic angiography Extracranial carotid stenting Neurointervention for arterial dissections Simulator training Session 2 (Advanced flow model, animal models)
Months 18 – 24	
Didactic	Cost comparison of neurointervention equipment and devices Cost effective patient care Neurointervention billing and coding Setting up a neurointervention practice Fellow's review of the neurointervention core curriculum
Clinical	Neurointervention considerations in pregnant patients Monthly Morbidity, mortality, improvement conference Monthly cerebrovascular conference Monthly Decisions Conference / difficult cases review Monthly Neuroradiology conference
Procedural	Pediatric interventional angiography Endovascular complications and their management Other pediatric vascular disorders Cerebral venous thrombosis Idiopathic intracranial hypertension

Remember, what awaits you after these two years has been the goal of all your training: the real world, hence the everyday goal should be to know how to be best trained to fulfill the requirement of your first attending job. Please note that our ideas and opinions are our own and do not reflect those of those of the society.

Fawaz Al-Mufti,MD and Krishna Amulur,MD

The Vertebral artery Origin stenosis Treatment via Endovascular techniques Registry (VOTER)

Randall C. Edgell

The Society of Vascular and Interventional Neurology is poised to once again advance the understanding of vertebral artery origin disease through the VOTER study. Vertebral artery origin stenosis (VAOS) is the second most common site of extracranial stenosis, and may be responsible for as much as 20% of posterior circulation strokes [1].

This registry represents the second phase in the effort of the SVIN Research Consortium. Previously, this consortium retrospectively collected and published over 160 cases of vertebral artery origin stenting, confirming the low peri-procedural risk associated with this treatment [2]. In addition, we noted lower than generally reported rates of restenosis and low recurrent rates of stroke/TIA.

Now, with abundant retrospective evidence on the safety of VAOS stenting, we need to show that this treatment is superior to the natural history of medically treated VAOS. Designing a randomized, controlled trial (RTC) of these two approaches is complicated by the lack of robust natural history data on medically treated VAOS. Prior studies have been small, contain mixtures of stenotic locations, and do not always focus of secondary prevention [3-5]. Without this data, it is difficult to design a RTC with the power to prove the hypothesis that stent-treated VAOS patients have a lower risk of recurrent symptoms than medically treated patients.

That is where the VOTER study comes in. This two-arm, prospective registry will include 100 medically treated and 100 stent-treated patients with VOAS. Data will be collected from 20 centers in each arm (5-10 patients per center). The SVIN membership will be the primary resource for selecting centers and is a natural fit for such a study. The data entry tool will be straightforward and web-based.

By developing a group of centers and the IT infrastructure to conduct the VOTER study, we will be well positioned to complete for larger scale funding of an RTC comparing these two treatments.

The VOTER study is the recipient of one of the two inaugural SVIN Research Grants. This important seed funding will allow the groundwork to be laid for the project outlined above. Stay tuned!

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Intra-Saccular Flow Disruption Reaches US Shores

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In recent years, the frontiers of endovascular brain aneurysm treatment have expanded significantly thanks to the arrival of flow diversion.

Flow diversion was initially designed for the endovascular treatment of *wide-neck sidewall* intracranial aneurysms with *intra-vascular* devices such as Pipeline (Medtronic), SILK (Balt), FRED (Microvention), P64 (Phenox) and Surpass (Stryker). By deploying a tightly-wound tubular wire mesh within the parent artery's lumen across the aneurysm neck, blood flow is diverted away from the aneurysm, thus inducing progressive thrombosis. As the aneurysm thromboses, the wire mesh is used as a "scaffold" by the parent artery and endothelialization and healing across the aneurysm neck occurs over time. However, since a considerable amount of metal is deployed within the parent artery's lumen, dual antiplatelet therapy needs to be administered for several months to prevent device thrombosis. The use of dual antiplatelet therapy with intra-vascular flow diversion devices has been associated with thromboembolic and hemorrhagic complications, which are due, at least in part, to considerable variability in patient response to clopidogrel therapy. Nevertheless, flow diversion currently provides the most durable endovascular treatment of wide-neck sidewall intracranial aneurysms.

The innovative concept of flow diversion has subsequently been applied to *wide-neck bifurcation* intracranial aneurysms with the advent of *intra-saccular flow disruption* devices. By far, the most widely-used and widely-studied intra-saccular flow disruption device is the Woven Endo-Bridge (WEB) device (Figure, Sequent Medical). The process by which intra-saccular flow disruption leads to aneurysm occlusion parallels intra-vascular flow diversion in several ways. By deploying a tightly-wound *basket wire mesh* inside the aneurysm lumen, blood flow is diverted away from the aneurysm sac, thus inducing progressive thrombosis. As the aneurysm thromboses, the wire mesh at the level of the aneurysm neck is used as a "scaffold" by the parent artery and endothelialization and healing across the aneurysm neck occurs over time. A key advantage of the WEB device for treatment of wide-neck bifurcation aneurysms is that it obviates the need for stents to protect the arteries arising from the aneurysm neck, thus reducing (1) the degree of manipulation of distal cerebral vasculature, and (2) the need for dual antiplatelet therapy with associated risk of thromboembolic and hemorrhagic complications. Further, this novel technology may enable the endovascular treatment of acutely-ruptured wide-neck intracranial aneurysms without the use of stents. In addition, by providing a more organized scaffold for endothelialization at the level of the aneurysm neck, intra-saccular flow disruption may provide a more durable endovascular treatment for bifurcation aneurysms than bare-platinum coils.

The first use of the WEB device in a human patient was performed in October 2010 by Prof. Joachim Klisch in Erfurt, Germany. Since then, in the span of 5 years, more than 2,000 ruptured and unruptured intracranial aneurysms have been treated worldwide with the WEB device. Importantly, among all emerging technologies, the WEB device has been one of the best-characterized by early prospective, monitored, multi-center studies with independent core lab and independent adverse event adjudication. A recent combined examination of the WEBCAST (WEB Clinical Assessment of Intrasaccular Aneurysm) and French Observatory studies, 2 prospective, multi-center studies including 114 wide-neck bifurcation

Intra-Saccular Flow Disruption Reaches US Shores

aneurysms treated with WEB,[1] showed (1) a favorable risk profile with no mortality and 2.7% morbidity at 30 days, and (2) favorable efficacy with 82% complete aneurysm occlusion or neck remnant at 12 months. Considering these were all bifurcation aneurysms with a mean neck of 5.6mm, these results compare rather favorably to stent-assisted coiling for this type of aneurysms.

An important topic is the safety and efficacy of the WEB device for treatment of acutely ruptured wide-neck bifurcation aneurysms. A recent retrospective, multi-center European study of 47 patients with 52 acutely ruptured bifurcation aneurysms treated with WEB, 94% of which had a neck ≥4mm,[2] showed 9 adverse events potentially related to the WEB device (17%, 3 thromboembolic events, 5 WEB protrusions into the parent artery and 1 aneurysm perforation), but none had a clinical impact. At follow-up, 80% of aneurysms had either complete aneurysm occlusion or neck remnant, and 4 aneurysms were re-treated (7.7%). Again, considering that these were mostly wide-neck bifurcation aneurysms, these results show great promise for this new technology to expand the frontiers of endovascular treatment of ruptured wide-neck bifurcation aneurysms. Further, with the development of lower-profile delivery systems for the WEB device, such as the 0.021" and 0.017" delivery systems, an increasing number of small ruptured bifurcation aneurysms could be safely treated with this technology.

As with all emerging technologies, the question of long-term durability of aneurysm occlusion needs to be examined. While more long-term results will become available in the future as this technology matures, a recent multi-center European study examined the long-term results in 26 patients with 26 aneurysms treated with the WEB device, with a median follow-up of 27.4 months.[3] In this series, 3 aneurysms were re-treated between short-term and mid-term follow-up (11.5%), but no aneurysms were re-treated between mid-term and long-term follow-up. At long-term follow-up, 84% of aneurysms were either completely-occluded or had a neck remnant, and no aneurysm showed a worse degree of occlusion between mid-term and long-term follow-up. Hence, intra-saccular flow disruption with the WEB device may provide durable long-term results, but more studies are needed as long-term follow-up becomes available in more patients.

Intra-saccular flow disruption reached US shores in the summer of 2014 with the enrollment of the first subject in The WEB Intrasaccular Therapy Study (WEB-IT). This prospective, multi-center, single-arm cohort study aims to examine the safety and efficacy of the WEB device for the treatment of wide-neck bifurcation intracranial aneurysms. The trial is currently well-underway and enrollment completion is expected in early 2016. Provided approval by the Federal Drug Administration is granted after trial completion, the availability of this exciting new technology will expand the frontiers of endovascular brain aneurysm treatment and provide a valuable additional tool to Neurointerventionalists in the United States to treat patients with wide-neck bifurcation intracranial aneurysms.

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Announcement: SNS CAST Update re: NeuroEndovascular Surgery

The Committee on Advanced Subspecialty Training (CAST) announces immediate availability of Practice Track certification of individuals who meet the "grandfather" criteria for NeuroEndovascular Surgery (NES).

In 2002, the Committee on Advanced of Subspecialty Training (CAST), under the direction of the Society of Neurological Surgeons (SNS), was charged with the development and oversight of subspecialty fellowship training within neurosurgery. Since that time, CAST has accredited multiple subspecialty neurosurgical fellowships in ACGME-approved neurosurgical training programs across North America.

Unlike most other subspecialties of Neurological Surgery, NeuroEndovascular Surgery is also delivered by other disciplines, including Radiology and Neurology. After due deliberations and discussions with many of the leaders of these other specialties, CAST is now providing similar accreditation and certification organizational structure and services to non-neurosurgical practitioners of this subspecialty.

A NeuroEndovascular Surgery Advisory Council (NESAC) has been formed, initially made up of leaders from each of the three subspecialties (Neurosurgery, Neurology, and Radiology), with additional committee members derived from the Joint Section of Cerebrovascular Surgery (JCVS), the Society of Neuro- Interventional Surgery (SNIS), and the Society of Vascular Interventional Neurologists (SVIN). This organizational structure, including the JCVS, the SNIS, and the SVIN, will thereafter work within the CAST framework to provide the structure, content, and quality measures defining the training of Neuroendovascular Surgery. The NESAC will serve as the CAST Fellowship Review Committee for this subspecialty and will be responsible for decisions on all submitted applications.

Practice Track Individual Certification for NeuroEndovascular Surgery will enable current practitioners of this subspecialty (who meet the criteria) to obtain individual certification that will serve to provide evidence that their completed fellowship training in this area has met a standard consistent with the highest levels of training across all specialties.

For more information on Practice Track Individual Certification for NeuroEndovascular Surgery –click the following link: Practice Track Certification - NES

The Committee on Advanced Subspecialty Training (CAST) functions under and is responsible to the Executive Council of The Society of Neurological Surgeons. CAST is responsible for accreditation of subspecialty training fellowships and subspecialty certification of fellows in neurosurgery and for development and updating of subspecialty training requirements.

For any correspondence or questions contact the CAST Office: Society of Neurological Surgeons/ CAST(323) 226-7421 michelle.a.matthews@usc.edu

Regards,

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- Follow the SVIN Twitter page @svinsociety

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- Log into your Facebook account
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